

TREE-FRUIT DISEASE and INSECT CONTROL

in the HOME GARDEN



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THIS bulletin provides home gardeners with a simple spray program that should enable them to grow relatively clean tree fruit if they apply the sprays timely and thoroughly. For the commercial orchard, the recommendations in Cornell Extension Bulletin 812, *1954 Spray Schedules for Tree Fruits*, should be followed.

SPRAYS

Dry wettable DNC powder containing salts of dinitro ortho cresol used in a spray at the rate of $1\frac{1}{2}$ cups in 5 gallons of spray kills the eggs of various *aphids* on apples, cherries, and currants, and greatly reduces the effects of *bud moth* and *oyster shell scale* on these fruits. When applied on pears in the green tip stage, DNC controls *pear psylla* and the *sooty blotch* disease as well. The DNC also controls *anthracnose* of raspberries and blackberries and greatly reduces *spur blight*. Spraying the ground with the DNC solution reduces the numbers of overwintering spores of *apple* and *pear*

scab and of *cherry leaf spot*. Paste forms of DNC are still more effective as ground sprays but difficult to use in a hand sprayer.

Malathion (25 percent powder) may be used in place of the DN sprays for *aphid*, *mite*, and *pear psylla* control at the rate of 10 tablespoons in 5 gallons of spray or at manufacturer's directions. It should be included in the delayed-dormant, pink, and calyx sprays on apples, pears, and cherries in place of DN. It may also be included in later sprays on all fruits if these pests build up.

A number of home fruit-spray mixtures in small packages are now on the market. These mixtures usually contain captan, ferbam, sulfur, or combinations of these three; DDT; and methoxychlor. Used at the amounts given on the container, these mixtures usually give fairly good control of fruit insects and diseases and greatly simplify the work of the home fruit owner.

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SPRAY SCHEDULE AND MATERIALS FOR EACH 5 GALLONS OF SPRAY

Period	Apples	PEARS	Cherries	Peaches	Plums and Prunes
Dormant (Before buds swell)	Dry wettable DNC 1½ cups Spray both trees and ground	Dry wettable DNC 1½ cups Spray both trees and ground	Dry wettable DNC 1½ cups Spray both trees and ground (see page 4)	Dry wettable DNC 1½ cups Spray trees before buds swell	Lime-sulfur 1-8 or bordeaux mixture on trees. (See page 4.) Or dry wettable DNC 1½ cups
Delayed Dormant (From ¼ to ½ inch green leaf)	Sulfur, ¼ pound				
Pink (Just before the blossoms open)	Sulfur, ¼ pound DDT, 1 cup		Sulfur, ¼ pound	Sulfur, ¼ pound	
Petal Fall (When the last of the petals are falling)	Sulfur, ¼ pound Methoxychlor (50 per cent powder), 15 tablespoons	Sulfur, ¼ pound Methoxychlor (50 per cent powder), 15 tablespoons DDT (50 per cent powder), 1 cup	Sulfur, ¼ pound Methoxychlor (50 per cent powder), 15 tablespoons	Sulfur, ¼ pound Methoxychlor (50 per cent powder), 15 tablespoons	Sulfur, ¼ pound Methoxychlor (50 per cent powder), 15 tablespoons
10 Days after Petal (When the shucks are falling)	Same as for Petal		Same as for Petal Fall	Same as for Petal Fall	Same as for Petal Fall

DN or malathion should be used with these mixtures as indicated above for protection against *aphids*, *mites*, and *pear psylla*. If *two-spotted spider mites* become a problem, any one of the following at manufacturers' directions is helpful: malathion, ovotran, aramite, dimite, or sulphenone. Where *apple maggot* is a problem, the DDT formula in 5 cover sprays at 10-day intervals beginning about June 25 is recommended.

Wettable sulfur

As a fungicide in the regular sprays on apple, pear, peach, plum or prune, and sweet cherries, one of the commercial brands of dry wettable sulfur best fits the home spraying program. While not so effective as liquid lime-sulfur against the fungous disease, reasonably good control may be obtained. The material is commonly available, and peaches and pears will not be injured as they frequently are with lime-sulfur. One-fourth pound of the wettable sulfur makes 5 gallons of spray.

Fixed copper for sour cherries

For sour cherries only, one of the commercial brands of fixed copper sprays should be used at manufacturers' directions where the *cherry leaf spot* has been serious in the past.

Bordeaux mixture

Quinces may be sprayed with bordeaux at the same period as apples. To prepare 5 gallons of bordeaux mixture, 3 ounces of copper-sulfate crystals are dissolved in hot water in a glass container and diluted to 5 gallons with water; 3 cupfuls of hydrated lime are added.

Grapes should be sprayed with the bordeaux mixture just before and just after bloom, then 2 weeks and 4 weeks later. In the first two sprays for grapes, 1 cup of 50 per cent DDT wettable powder, or 10 level tablespoonfuls of lead arsenate should be added to the bordeaux mixture.

BLACK KNOT ON PLUMS AND PRUNES

PLUMS and prunes may be seriously infected with black knots. All knots should be cut out by May. On large limbs and trunk all knotted tissue should be cut out down to the wood and for $\frac{1}{2}$ inch beyond the visibly knotted area. Small branches are cut off 4 inches back of the visible swelling. All material removed should be burned. A special spray should be applied as the buds show green tips. This spray may be liquid lime-sulfur diluted 1 to 8 ($2\frac{1}{2}$ quarts for each 5 gallons of spray) or the bordeaux mixture given above.